EXAMINING THE ROLE OF TRUST IN SHAPING CUSTOMER SATISFACTION OF MOBILE BANKING

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EXAMINING THE ROLE OF TRUST IN SHAPING CUSTOMER SATISFACTION OF MOBILE BANKING

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In the name of Allah, most gracious and most merciful.

All praises and thanks to Allah and peace and blessings be upon to his messenger Muhammad (S.A.W).

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ABSTRACT

Mobile banking is the latest technology offered by service providers that allows customers to conduct banking transactions via mobile terminals. Mobile banking like other online transactions involve great uncertainty and risk, thus, customers need to build trust to alleviate perceived risk and facilitate their transactions. Owing to its significant role, trust has received considerable attention in information systems (IS) research, especially in the e-commerce context. However, little research has been done on the success of this technology, especially when investigating customer satisfaction. In this study, some modifications to the DeLone and McLean Model (2003) of IS Success are proposed whereby the model may be applicable to post adoption customer satisfaction. The target population is the users of mobile banking in Somaliland where mobile banking is at peak prevalence. Quantitative research method is deemed to be the suitable way of study. Partial Least Square (PLS) is the research instrument used to examine the role of trust in mediating the effects of independent variables on customer satisfaction. The findings suggest that quality factors and structural assurance have significant direct effect on both trust and customer satisfaction. Meanwhile, company reputation positively affects trust but not customer satisfaction. Trust is also shown to fully mediate the interrelationships of information quality, system quality and company reputation on customer satisfaction. Theoretical contributions of the findings are discussed and suggestions for future research are presented.
ABSTRAK

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<td>ATM</td>
<td>Automated Teller Machine</td>
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<tr>
<td>AVE</td>
<td>Average variance extracted</td>
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<td>CA</td>
<td>Cronbach’s Alpha</td>
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<td>CEO</td>
<td>Chief Executive Officer</td>
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<td>CR</td>
<td>Company Reputation</td>
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<td>Customer Satisfaction</td>
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<td>d</td>
<td>Degree of Accuracy</td>
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<td>df</td>
<td>Degree of freedom</td>
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<td>E-Money</td>
<td>Electronic Money</td>
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<td>ELM</td>
<td>Elaboration Likelihood Model</td>
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<td>Findex</td>
<td>Financial Inclusion Database</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GSM</td>
<td>Global System for Mobile Communications</td>
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<td>GSMA</td>
<td><em>Groupe Speciale</em> Mobile Association</td>
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<td>H</td>
<td>Hypothesis</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>IDT</td>
<td>Innovation Diffusion Theory</td>
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<td>IQ</td>
<td>Information Quality</td>
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<td>IS</td>
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<td>KMO</td>
<td>Kaiser-Meyer-Olkin</td>
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<td>M</td>
<td>Mean</td>
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<td>MMU</td>
<td>Mobile Money for Unbanked</td>
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<td>Mobile Network Operator</td>
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<td>PBC</td>
<td>Perceived behavioral control</td>
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<td>PDA</td>
<td>Personal Digital Assistants</td>
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<td>PEOU</td>
<td>Perceived Ease of Use</td>
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<td>Partial Least Square</td>
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<td>Telecommunications Somaliland</td>
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<td>TRA</td>
<td>Theory of reasoned action</td>
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<td>US</td>
<td>United States</td>
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<td>UTAUT</td>
<td>Unified Theory of Acceptance and Use of Technology</td>
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<td>VIF</td>
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<td>WAP</td>
<td>Wireless Application Protocol</td>
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CHAPTER 1

INTRODUCTION

1.1 Research Background

Mobile banking is among the latest in a series of recent mobile technological wonders. Although automated teller machine (ATM) and Internet banking offer effective delivery channels for traditional banking products, but as the modern delivery channel established by retail and banks in many developed and developing countries, mobile banking is likely to have significant effects on the market (Safeena et al., 2012). In particular, the expanded uses of smartphones has increased demand for mobile banking services, prompting many more banks, software houses and service providers to offer this innovative service. It comes with new sets of products and applications designed to extend their client reach (including to unbanked populations), improve customer retention, enhance operational efficiency, increase market share, and provide new employment opportunities (Shaikh, 2013).
Despite such benefits, the use of mobile phones or tablets to conduct banking transactions or access financial information is not as widespread as might be expected (e.g., Dineshwar and Steven, 2013; Shih et al., 2010). Juniper Research (2013) has revealed that more than 1 billion people are expected to use mobile banking globally by 2017, but that level represents only 15% of the global mobile subscription base—a base that accounts for approximately 96% of the world’s population (International Telecommunication Union, 2011). In addition, approximately half of all mobile subscribers remain unbanked, with limited access to traditional financial services. Porteous (2006) distinguishes “additive” mobile banking models from the transformational models, and defines transformational mobile banking services as “those in which the financial product linked to the use of the phone is targeted at the unbanked, who are largely low income people”. Transformational mobile banking services have increasingly been regarded as the tool for bringing financial services to the largely unbanked population of developing countries, the hope being that by having access to financial services, the life of the people will be completely transformed.

Interestingly, apart from continued violence and instability, there has been a fascinating experiment underway in mobile banking in Africa, and especially in the Somali territories (Sayid et al., 2012). Many countries in the region face crumbling infrastructure and weak government, yet even in the absence of strong legal and regulatory frameworks, Information and Communications Technology (ICT) companies, including mobile phone and Internet companies, are investing and innovating in unprecedented ways. Some of the most new platforms to emerge have facilitated the use of mobile banking, a system that allows users to transfer money to accounts, pay for goods and services, and store money in e-wallets, all through the mobile phone (Stremlau and Osman, 2015).

Eastern Africa is leading the world in the use and penetration of mobile banking. In Kenya, where mobile money originated with Safaricom’s M-PESA, an estimated 70 per cent of adults use their mobiles for payments; neighboring Uganda and Somalia are close behind (Penicaud and McGrath, 2013). While much has been written about M-PESA in Kenya (Hughes and Lonie, 2007; Morawczynski, 2009), far less attention has
been given to the Somali territories where the world’s most ambitious experiment in mobile money is taking place, filling a gap in the banking sector and reducing a reliance on cash. This growth is driven by telecoms companies, some of the territories’ most powerful and wealthy businesses, and it is closely intertwined with the profitable remittance sector that is estimated to account for up to 40 per cent of Somalia’s GDP (Stremlau and Osman, 2015).

The focus in this study is on Somaliland, the self-declared independent region of northwestern Somalia, which is a fascinating case not only for mobile banking but also for its unique process of state-building. Recently, the World Bank’s Global Financial Inclusion Database (Findex) revealed that Somalia was one of the most active mobile money markets. The number of population in Somalia reported using mobiles to pay bills, send and receive money is among the highest rates in the world. Most of the mobile activity has been driven by Zaad service offered by Telesom which is based in Somaliland. Their broader vision was to bring financial services to Somaliland’s population, while on a strategic level the service was initially designed as a customer retention tool (Penicaud & McGrath, 2013).

Despite failed efforts to gain international recognition, Somaliland has adeptly crafted a relatively peaceful and democratic society (Harper, 2012). After declaring independence from the war-torn south-central regions of Somalia in 1991, Somaliland has held competitive elections several times, even electing an opposition party over an incumbent by a small margin and subsequently effecting a peaceful transfer of power. Somaliland has established its own government institutions that issue passports and currency (the Somaliland Shilling) and provide some services such as education and policing. In spite of these successes, Somaliland’s lack of international recognition imposes significant limitations, particularly when it comes to participation in the global economy. Without easy access to international banking, large lenders, or the ability to integrate with international financial institutions, the government and the people of Somaliland have been further marginalized. The adoption of mobile money in Somaliland has helped to mediate this isolation (Stremlau and Osman, 2015).
1.2 Research Problem

For customers, mobile banking offers a secure and convenient alternative to cash. By giving consumers secure and immediate access to all their funds on demand, Telesom in Somaliland has significantly improved the ability of customers to make better buying decisions by launching Zaad (Stremlau and Osman, 2015). Moreover, for central banks digitizing transactions brings greater transparency, reduced production costs and better visibility into the economic environment (Shaikh, 2013). However, mobile banking like other online transactions involves great uncertainty and risk due to the virtuality, anonymity and temporal and spatial separation. Thus, customers need to build trust to alleviate perceived risk and facilitate their transactions. Owing to its significant role, trust has received considerable attention in information systems research, especially in the e-commerce context (Varnali and Toker, 2010).

As noted earlier, mobile banking industry in Somaliland is relatively in its infancy, yet growing almost at an exponential rate (Mohseni-Cheraglou, 2013). Similar to other innovation diffusion contexts, mobile banking adoption can be also be studied at two levels: initial mobile banking adoption and post mobile banking adoption (Kang et al., 2012). Contrary to the initial adoption of mobile banking which is well-studied, the existing knowledge of the satisfaction of the current customers and in turn their retention is limited. This important existing evidence within the literature suggests that similar to other service industries, lack of understanding on determinants of customer satisfaction can be costly to service providers which have made considerable amount of investments to provide mobile banking services and technological support (Shaikh, 2013). In Somaliland context, the problem lies that only 40% of Telesom subscribers are Zaad service users. In order to retain its customers, Telesom faces a daunting task to attract all to Zaad service in the face of emerging competing telecommunication companies.

Typically, trust exerts great influence on customer satisfaction in e-commerce services. Balasubramanian et al., (2003) found that perceived trustworthiness of an online broker is directly related to online investor’s satisfaction. Yoon (2002) posited that satisfaction is an outcome of trust and pointed out that trust correlates positively with end user satisfaction. In addition, scholars have regarded trust as the central construct in
customer loyalty and repurchase intentions (Sirdeshmukh et al., 2002). Moreover, under relationship marketing theory, trust is identified as a key mediator that influences company actions on customer behaviours (Morgan and Hunt, 1994). The above line of reasoning leads to the belief that trust is most likely to play a mediating role for customer satisfaction in mobile banking. Therefore

The role of trust in mobile banking has been investigated by a few number of research articles (Shaikh and Karjaluoto, 2015) of which fewer still were dedicated to role of trust in customer satisfaction of mobile banking. Despite the limited understanding of determinants of customer satisfaction in mobile banking context, the existing literature on corresponding research contexts (e.g. internet banking) revealed that instead of perceptual-cognitive factors which are important to initial adoption, the technical characteristics of the e-service in addition to peripheral cues such as company reputation and structural assurance are key determinants of post adoption behaviour (satisfaction) of existing customers (Chiu et al., 2012). The elaboration likelihood model (ELM) proposes that users change their attitude via a dual route including central route and peripheral route. Information quality, system quality and service quality act as central cues, whereas company reputation and structural assurance act as peripheral cues (Zhou, 2012).

Central cues in this study are the quality factors enlisted in DeLone and McLean’s Information Systems Success Model (1992, 2003). Through this model, the causal relationships between quality factors, trust and customers’ satisfaction in mobile banking can be grasped. In summary, if the quality of the service is up to the desired standard, customer tend to trust the service provider and their level of satisfaction will be increased (Koo and Wati, 2010). In comparison, peripheral cues include company reputation and structural assurance. Regardless of the privacy and security concerns, one factors that users of mobile banking noted to be crucial for initial adoption is the company’s reputation (Beldad et al., 2010). Customers trusted Telesom with their money because they knew the company from their previous dealings. However, given the lack regulatory guarantees in Somaliland, there are significant concerns about the security of the funds. Users show far less trust in the mobile banking in the event of absence of strong formal dispute resolution procedures (Stremlau and Osman, 2015). Here is where the second component of
peripheral cue, structural assurance, comes into play. Structural assurance of the security of the money kept in Zaad can be in the form of company management, government police and courts and traditional elders. In any case, structural assurance plays an active role in resolving conflicts that result from Zaad transactions.

Hence, the principal goal of this study is threefold: First, it investigates the role by trust in shaping the customer satisfaction of mobile banking. Meanwhile, it contributes to the body of literature by using an elaboration likelihood perspective to explain the key determinants of customer satisfaction in mobile banking via central and peripheral routes. Second, the study attempts to validate the significant role of quality factors on trust and customer satisfaction (Lee and Chung, 2009). Third, this research critically examines the effect company reputation and structural assurance on trust and customer satisfaction in mobile banking in a developing country where formal dispute resolution procedures do not exist.

1.3 Research Questions

i. Does the quality factors (information, system and service qualities) affect trust among mobile banking customers?

ii. Does company reputation affect trust among mobile banking customers?

iii. Does structural assurance affect trust among mobile banking customers?

iv. Does trust mediate the effect of quality factors and customer satisfaction?

v. Does trust mediate the relationship between company reputation and customer satisfaction?

vi. Does trust mediate the relationship between structural assurance and customer satisfaction?
1.4 Research Objectives

i. To identify the direct effect of quality factors on trust among mobile banking customers.

ii. To identify the direct effect of company reputation on trust among mobile banking customers.

iii. To identify the direct effect of structural assurance on trust among mobile banking customers.

iv. To examine the mediating role of trust in the relationship between quality factors and customers satisfaction in mobile banking.

v. To examine the mediating role of trust on relationships between company reputation and customers satisfaction in mobile banking.

vi. To investigate the mediating role of trust on relationships between structural assurance and customers’ satisfaction in mobile banking.

1.5 Scope of the Research

This study uses elaboration likelihood model (ELM) to investigate the key determinants of customer satisfaction in mobile banking. Furthermore, the research attempts to examine the mediating role of trust between the interrelationships of quality factors, company reputation and structural assurance with customer satisfaction in mobile banking. The target populations are the active customers of Zaad service in Somaliland provided by Telesom Company.

1.6 Significance of the Research

The results of this study helps Telesom in Somaliland to recognize the status of its customers’ satisfaction in Zaad. Also, it also assists Telesom to identify the level of the quality (as indicated by information, service and system qualities) of Zaad service. As
a consequence, Telesom and other similar companies can use the research to attract new users. Overall, the study helps to enhance the understanding of the factors determining customer satisfaction in mobile banking, thereby assisting the marketing department of service providers to target customers who didn’t adopt mobile banking yet.
CHAPTER 2

LITERATURE REVIEW

2.1 Overview of Mobile Banking

Mobile banking is when users adopt mobile terminals to access various payment services, such as account balance enquiry, transference, bill payment and financial management (Shaikh, 2013). Mobile networks have freed users from temporal and spatial constraints, and enabled them to use mobile banking services at anytime from anywhere. This provides great convenience to users. Certainly, mobile banking technology has the potential to improve people’s quality of life and bring efficiency to banks and financial service providers (Malaquias and Hwang, 2016). However, mobile banking also involves great uncertainty and risk. For example, mobile networks are vulnerable to hacker attack and information interception. Viruses and Trojan horses may also exist in mobile terminals. These problems increase users’ concern about payment security and decrease their trust in mobile banking, which may further affect their usage intention and behavior (Zhou, 2012).
Mobile banking, which is also referred to as cell phone banking, is “the use of mobile terminals such as cell phones and personal digital assistants (PDAs) to access banking networks via the wireless application protocol (WAP)” (Zhou et al., 2010). The mobile banking is similar to Internet banking in that it provides a fast and convenient way of performing common banking transactions.

In order to enjoy the benefits of mobile banking, a user needs a mobile phone that equipped with the features required by the bank that provides this service. Once a user obtained a registered account for mobile banking from the banking institution, the user would be able to do banking transactions from anywhere (Sagib, 2014). The mobile banking can be done either by accessing the bank’s web page through the web browser on the mobile phone, via text messaging, or by using an application downloaded to the mobile phone. Mobile banking allows customers to perform three fundamental transactions (Shaikh and Karjaluoto, 2015):

- storing money in an account that is accessible by the mobile device
- completing cash-in and cash-out transactions with the stored account
- transferring money among different accounts.

Despite such benefits, the use of mobile phones or tablets to conduct banking transactions or access financial information is not as widespread as might be expected (Dineshwar and Steven, 2013; Luarn and Lin, 2005; Shih et al., 2010), as demonstrated by popular media reports. Juniper Research (2013) has revealed that more than 1 billion people are expected to use mobile banking globally by 2017, but that level represents only 15% of the global mobile subscription base - a base that accounts for approximately 96% of the world’s population (International Telecommunication Union, 2011) as in Table 2.1.
Table 2.1: Mobile banking users (International Telecommunication Union, 2011).

<table>
<thead>
<tr>
<th></th>
<th>Number (Billions)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global population</td>
<td>7.100</td>
<td>100</td>
</tr>
<tr>
<td>Mobile phone subscription</td>
<td>6.835</td>
<td>96</td>
</tr>
<tr>
<td>Mobile banking users</td>
<td>0.590</td>
<td>8.6</td>
</tr>
</tbody>
</table>

Table 2.1 reflects that only 8.6% of the global population have access to mobile banking, which is relatively small considering that approximately half of all mobile subscribers remain unbanked, with limited access to traditional financial services (Shaikh, 2013). However, mobile banking has proven to be viable and sustainable in some countries including Somaliland and Kenya. Mobile operators in those countries offer to their unbanked base subscribers convenient and affordable financial services.

2.2 Mobile Banking in Somaliland

Somaliland is a small territory located in the Horn of Africa its population is estimated 3.85 million in 2010 while 55% of the population are nomads and 700,000 people live in the capital city Hargeisa (Ministry of National Planning, 2013). In May 1991, after years of civil war, the people of Somaliland declared unilateral independence from Somali Democratic Republic. Although Somaliland is not recognized as a country by the international community, it has developed its own governing institutions and currency and it functions independently from the rest of Somalia. Constitutionally, the Republic of Somaliland is a democratic country with a multi-party system (Penicaud & McGrath, 2013).

Since its launch in Somaliland, Zaad has gained significant traction: in June 2012, almost 40% of Telesom GSM subscribers were active users of Telesom Zaad (Table 2.2). What is most striking about the service is the level of activity on the mobile money platform. Active Telesom Zaad users perform over 30 transactions per month on average, far above the global average of 8.5 per month. Telesom Zaad is one of the 14 GSMA
Mobile MoneySprinters and is recognized as one of the most successful mobile money services in the world (Penicaud & McGrath, 2013).

**Table 2.2:** Zaad Service at a Glance (Penicaud & McGrath, 2013).

<p>| | |</p>
<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td><strong>Active users</strong></td>
<td>400,000 (30-day basis)</td>
</tr>
<tr>
<td><strong>Active rate</strong></td>
<td>73%</td>
</tr>
<tr>
<td><strong>Transaction volume</strong></td>
<td>11.4 million (all products, March 2013)</td>
</tr>
<tr>
<td><strong>Product offering</strong></td>
<td>Air top-up, money transfer, bill payment</td>
</tr>
</tbody>
</table>

To understand how enormous Zaad service is in Somaliland, the statistics of Somaliland are compared with those of Saudia Arabia, Kuwait and Russia (a developed country) in Table 2.3. Though Somaliland has the lowest rate of mobile subscribers per 100 people, it has the highest per cent of adults, using mobile phones to pay bills (26.2%) or send and receive money (31.5%).

**Table 2.3:** Comparison of Somaliland with Saudi Arabia, Kuwait and Russia (Mohseni-Cheraglou, 2013)

<table>
<thead>
<tr>
<th>Country</th>
<th>Mobile subscribers (per 100 people)</th>
<th>Mobile phone used to pay bills (% adults)</th>
<th>Mobile phone used to send/receive money (% adults)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arabia</td>
<td>191.2</td>
<td>15.0</td>
<td>6.5</td>
</tr>
<tr>
<td>Kuwait</td>
<td>160.8</td>
<td>9.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Russia</td>
<td>179.3</td>
<td>2.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Somaliland</td>
<td>26.0</td>
<td>26.2</td>
<td>31.5</td>
</tr>
</tbody>
</table>

The spread of mobile phones across the developing is one of the most significant
stories of the past decade. However, many of these embryonic mobile users live in cash economies, without access to financial service that others take for granted (Tobbin, 2010). Indeed, across the developing world, there are probably more people with mobile handsets than with bank accounts. Similarly, scholarly research on the adoption and socioeconomic impacts of mobile banking in the developing world is scare (Maurer, 2008).

2.2.1 Challenges to Mobile Banking Growth in Somaliland

Service providers like Telesom in Somaliland use mobile banking as a tool of customer retention. In the face of fierce competition in the market, Telesom has a daunting task to attract as much of its base subscribers to Zaad service, its mobile banking application. Currently, about 60% of Telesom mobile users didn’t adopt Zaad service (Penicaud and McGrath, 2013). Some of the customers who adopted Zaad indicated that they had no choice but to trust in Zaad, particularly in a business environment where the majority of the population uses Zaad and the alternative mobile money platforms are not as widely used (Stremlau and Osman, 2015).

At the same time, given the lack of government or regulatory guarantees and the absolute liquidity of mobile banking money, there are significant concerns about the security of the funds. The more ambitious banking features of Zaad have encouraged skepticism and concern about how precarious the system as a whole may be (Stremlau and Osman, 2015). For example, most Somalis recall the rapid closure of Al Barakat after September 11, 2001, when the U.S. government accused it of supporting terrorism. While the accusation was later revealed to be unfounded, many Somalis not only lost an important path for remittances but they also lost significant sums of money that was being held within Al Barakat (Ali, 2013).

There are also significant privacy concerns that affect the relationship users have with Zaad, including who has access to users’ accounts and transactions (Sayid et al., 2013). These privacy concerns are not ungrounded. Companies in the Somali territories clearly have fewer privacy regulations, particularly when it comes to digital technologies,
and money transfer companies have, in the past, shared data with security services (Popham 2013). International regulations are certainly becoming more restrictive and there are growing pressures on telecoms and remittance companies to collect and share more data from users with international government and intelligence organizations.

Therefore, the problems for Telesom in Somaliland are the steps to be taken in order to attract new users and retain/satisfy current customers (Kang et al., 2012). In order to achieve this, trust within mobile banking environment and how vital it is to the understanding of determinants of mobile banking customer satisfaction must be explored. In a country with unique customs and environment as Somaliland, careful examination of the determinants of customer satisfaction and the role played by trust as a mediator is necessary.

2.3 Trust

2.3.1 Definition of Trust

In this study, trust is defined as a willingness to be in vulnerability based on the positive expectations towards another party’s future behavior (Koo and Wati, 2010). In other words, trust enables users to believe that mobile service providers have enough ability and benevolence to provide useful services to them (Zhou, 2011). Trust is an essential element in any social and business relationship whenever risk and uncertainty exist (McKnight and Chervany, 2001); trust enables people to be able to live in an uncertain and risky environment (Zhou, 2011). It helps to provide ways to diminish complexity in a complex environment by decreasing the number of options that a person has to consider in a given situation.

Trust has been studied and explored in several disciplines, each focusing on common and diverse themes (Komiak and Benbasat, 2004). In the area of psychology for example, trust is viewed as a personality-based trait, which is a deep internal feeling that is based on a variety of experiences in the individual’s life (Wang & Emurian). Psychologists believe that these experiences shape the individual’s disposition on trust, and are commonly referred to as dispositional trust (Tan and Sutherland; 2004).
Sociologists, on the other hand, view trust as a social structure which is situationally constructed; this is commonly referred to as institutional trust. Social psychologists see trust as the expectations, willingness, and risk of one party to another; this perception examines trust in another party and is often referred to as interpersonal trust (Tan & Sutherland). Several researchers have examined trust from a multi-dimensional perspective, and have integrated the varied trust dimensions - dispositional, institutional, and interpersonal trust as construct in an effort to determine an individual’s intention to trust, and ultimately their online purchase behavior (Gefen, 2002).

Trust is a complex and abstract concept (Ba and Pavlou, 2002). This had led to several definitions of trust across different disciplines. Due to the abstract nature of trust, the term is often interchanged with other similar concepts such as credibility, reliability or confidence, and often incorporates cognitive, emotional, and behavioral components. Long before the emergence of the Internet or e-commerce, the issue of trust has been conceptualized and studied by researchers in various areas. Trust is an essential component in getting and in maintaining customers’ interaction with an information system especially when this interaction is with a machine, a Website or an electronic device (Gefen et al., 2003). Online trust can be defined as “an Internet user’s psychological state of risk acceptance, based upon the positive expectations of the intentions or behaviors of an online merchant” (Wang and Emurian, 2005).

While the literature is replete with various definitions of trust, the salient theme throughout is centered on the attributes of competence, benevolence, predictability, and integrity (Tan and Sutherland, 2004). Competence focuses on the other parties’ abilities, skills, and expertise, while benevolence is the belief that the other party wants to do well. Predictability examines consistent behavior, while integrity is the belief that the other party will act fairly and in an honest manner (Ba and Pavlou, 2002). The many definitions of trust in the literature can be contributed to two primary reasons. First, because trust is an abstract concept, the term is often used interchangeable with other related concepts such as credibility, reliability or confidence. Second, the trust concept is a multi-faceted one that includes cognitive, emotional, and behavioral dimensions (Wang and Emurian, 2005).
2.3.2 Overview of Trust in Online Businesses

Trust in IS has recently become an active research area and researchers believe that the extent to which e-commerce will succeed is directly dependent on the level of trust that consumers have in the technology (Ba and Pavlou, 2002; Gefen et al., 2003). Lack of consumer trust is still believed to be a major impediment to the success of e-commerce (Wang and Emurian, 2005). If consumers are not able to develop some degree of confidence, predictability, benevolence, and trust in the vendor, it is likely that they will abort their purchase and look elsewhere for a more trustworthy alternative (Koufaris and Hampton-Sosa, 2004; Tan and Sutherland, 2004).

Unlike the traditional brick-and-mortar transactions where interaction is with a person, online transactions create an additional challenge in that transaction processing is carried out remotely and with no human interaction (Ba and Pavlou; 2002). In the traditional physical environment, a consumer’s decision to trust is often influenced by intrinsic cues such as color, music, store layout, or similar past experiences gathered from the physical surrounding (Koufaris and Hampton-Sosa, 2004; Wang and Emurian, 2005). Other external sources such as recommendations from others may also impact the decision to trust (Wang and Emurian, 2005). In remote environments, however such as the Internet, the perceived risk to carry out a transaction must be based on a trustworthy assessment by the consumer (Koufaris and William-Sosa, 2004).

There is a consensus among scholars in the IS literature that trust is a complex issue, and it is not yet well understood how it can be cultivated in the online environment (Wang and Emurian, 2005). Requirements relating to trust are often viewed from different perspectives by different stakeholders and often expressed in a variety of terms such as consumer privacy, risk, and security (Tan and Sutherland, 2004; Wang and Emurian, 2005). In order to gain a better understanding of trust, it is, therefore, necessary to examine how trust is defined in both the offline and online context, as well as the characteristics, elements, antecedents, dimension, and determinants of trust (Wang and Emurian, 2005).

Trust has been identified as a critical factor for the success of electronic finance due to the open and global nature of the internet or other networks as a transaction...
infrastructure where uncertainty arises and risk in online transactions makes trust a vital element of e-finance (Wang, 2010). A number of researchers have examined the role trust in e-finance and have found that trust directly or indirectly affects customers’ intention to engage in online activities.

Understanding the meaning of trust in the e-finance is an important step in order to identify its dimensions and antecedents that will be used to develop a trust model for the mobile banking domain. Several researchers have recognized the importance of the trust issue in different contexts, such as philosophy, psychology, information science, marketing and management. However, there is no agreement about its definition, dimensions, antecedents and outcomes. There are many reasons that justify this disagreement among researchers. The first is that every discipline views trust from its own perspective based on its research domain (McKnight and Chervany, 2001). This definition draws attention to the importance of confidence in the concept of trust. Second, many researchers have treated the conceptualization of trust as an one-dimensional construct, ignoring the huge body of literature suggesting that it is a multi-dimensional construct (Gefen et al., 2002). This often causes researchers to focus narrowly on specific aspects of trust, failing to fully identify its multi-dimensional nature.

2.3.3 Theoretical Background of Customer Trust

A number of studies have examined the notion of trust in various domains over the years, such as in bargaining (Schurr & Ozanne, 1985), industrial buyer-seller relationships (Doney & Cannon, 1997), distribution channels (Dwyer et al., 1987), the use of market research (Moorman et al., 1993) and partner cooperation in strategic alliances (Das, 1998). The research streams used in these studies can be classified into four categories, namely personality theories, institution-based trust, interpersonal and relationship marketing theories. These streams have conceptualized trust in different ways as discussed below.

Personality theory, also known as dispositional trust, has conceptualized trust as an individual characteristic. It views trust as a belief, expectancy or feeling that is deeply rooted in the personality and originates in the individual’s early psychological
development (Lee & Turban, 2001). Mayer et al. (1995) state that a disposition to trust will influence how much trust an individual has for a trustee prior to data on that particular party being available. One individual exhibits propensity to trust to the extent that he or she demonstrates a consistent tendency to be willing to be dependent on others across situations or persons (Chen & Dhillon, 2003). Therefore, people vary in their disposition to trust based on their differences of developmental experiences, personality types and cultural backgrounds. However, some researchers, such as Lewicki & Bunker (1995) state that personality traits are less predictive of specific behaviour, because they cannot differentiate between different situations. For example, the dispositional trust construct may not properly explain why a customer who has a high propensity to trust may have less trust towards a new internet or mobile banking service provider. Furthermore, this perspective of trust cannot be influenced by the internet vendor, because it is an uncontrollable factor (Yousafzai et al., 2009). Based on the above reasons, this theoretical perspective of trust will not be included in this study.

Institution-based trust views trust as a phenomenon within and between institutions (Lewicki & Bunker, 1995; Lee & Turban, 2001). Authors working from this perspective have investigated how institutions and incentives are created to reduce anxiety and uncertainty associated with exchange among relative strangers (Granovetter, 1985; Zucker, 1986). Institution-based trust is defined as being where a customer believes that the requisite conditions are in place to enable the customer to act with the anticipation of a successful future endeavor (Luhmann, 1979; Lewis & Weigert, 1985). Institutional trust is divided into two parts, namely situational normality and structural assurance. Situational normality is referred to as a customer’s beliefs that success is likely because the situation is normal (McKnight et al., 1998) or because ‘everything seems in proper order’ (Lewis & Weigert, 1985, p. 974). McKnight & Chervany (2001) point out that when customers believe that the internet situation is normal and their role and the vendor’s roles in the situation are appropriate, then the customer has a basis for trusting the vendor in this situation. However, when an internet vendor requires customers to follow unexpected procedures, the internet will be under suspicion and then the customer will not trust that website. This view is also compatible with the situation in the internet banking domain. If a customer finds that the bank website follows normal procedures, he or she will be
inclined to trust it. Since it is very difficult for customers to determine if their bank website follows normal procedures like other banks’ websites, because most of them have accounts with one bank and most banks allow their customers only to have full access for their websites, situational normality will not be included in the present study.

The second part of institution-based trust is structural assurance, which is defined as an individual’s belief that success is likely because guarantees, contracts, regulations, promises, legal resources, processes or procedures are in place that assures success (Shapiro, 1987). In the context of e-finance, this type of trust refers to customers’ perception about certain conditions, such as safety and security of the internet environment (McKnight et al., 2002) or legal and technical protection (Tan & Sutherland, 2004). Since structural assurance is important component of e-finance transactions, it will be included in this study.

Furthermore, interpersonal trust which treats trust as a social tie between a specific trustor and trustee is the most common approach to trust (Mayer et al., 1995). This category looks at trust as the expectation and willingness of the trusting party in a transaction, the risk associated with acting on such expectations and focusing on the contextual factors that either enhance or inhibit the development and maintenance of trust (Lee & Turban, 2001). It refers to an individual’s trust in another specific party that one trusts (McKnight & Chervany, 2001). Some researchers, such as Lewis & Wiegert (1985) divide interpersonal trust into two streams, cognitive trust and emotional trust. Cognitive trust that also refers to trusting beliefs is defined as a trustor’s rational expectation that a trustee will have the necessary attributes, such as competence and benevolence to be relied upon (Komiak & Benbasat, 2004), while emotional trust is defined as the extent to which a trustor feels secure and comfortable about relying on the trusted party (Swan et al., 1999). There is a difference between these streams. Cognitive trust focuses on reasoning or cognition. It is an individual’s cognition grounded on good rational reasons (Lewis & Wiegert, 1985). When a trustor believes that good reasons to trust are identified, cognitive trust will be developed (Lewis & Wiegert, 1985). For example, in working relationships, when a manager believes that one of their subordinates has certain qualities, such as skills and competencies to do his or her assignments properly, the manager’s cognitive trust will
develop towards that employee. This is similar in the e-finance domain, such as mobile banking. When customers believe that their banking service providers has some desirable attributes, such as ability and integrity that enable the bank to deliver its services in accordance with their expectations, their cognitive trust will be developed towards the mobile banking.

However, emotional trust focuses on feeling. It is an emotional security which enables a trusting to go beyond the available evidence and feel assured and comfortable about relying on a trusted party (Holmes, 1991; Komiak & Benbasat, 2004). In order for emotional trust to play an important role in understanding individuals’ trust, the relationships between a specific trusting and a trustee should be personal and close (Rempel et al., 1985). Therefore, this stream plays an important role in some situations, such as the organisational context where the relationships between the staff are typically personal and close. However, in the context of electronic finance, such as mobile banking, the distance and impersonal nature of the online environment make relationships between customers and financial providers impersonal and therefore not close. Thus emotional trust will not be included in the present study.

Finally, the role of trust in developing successful relationships is focused in the relationship marketing theory. Morgan and Hunt (1994) argue that trust is ‘key’ because it encourages marketers to work at preserving relationship investments by cooperating with exchange partners and resist attractive short-term alternatives in favour of the expected long-term benefits of staying with existing partners. Trust, they argue, is the cornerstone of relationship commitment, without it commitment flounders. Relationship marketers have attempted to bond customers to their companies in a number of ways (Xiong, 2013). Social, technological, legal, economic and cultural bonds all serve as exit barriers, discouraging customers from seeking alternative suppliers. Customers may therefore remain ostensibly loyal, even though they are not satisfied with the service they receive. Bonding which is not based on trust and commitment is unlikely to persist. Under relationship marketing theory, trust is identified as a key mediator that influences company actions on consumer behaviours (Morgan and Hunt, 1994). To say that trust “mediates” the effects of these variables on consumer decisions and behaviours is to argue that trust
plays an important “middleman” function in market exchange (Johnson 2007). Hence, since the above theory justifies the mediating role of trust, this study will adapt the mediation phenomenon of trust.

### 2.3.4 Trust in Mobile Banking

Compared to the abundant research on online trust, mobile banking trust has just begun to receive attention from researchers. Siau and Shen (2003) noted that mobile trust includes initial trust and continuous trust, which are affected by the factors associated with two aspects: mobile merchants and technologies. Lin and Wang (2006) revealed that trust has significant effects on mobile user satisfaction and loyalty.

Li and Yeh (2010) argued that design aesthetics affect mobile trust through ease of use, usefulness and customization. Vance et al. (2008) examined the effect of system quality including visual appeal and navigational structure on mobile user trust (Tao Zhou 2012). Similar to online transactions, mobile commerce also involves great uncertainty and risk. Thus trust is critical to facilitating mobile user behavior. However, compared to the abundant research on online trust, there exists less research on mobile trust. Siau and Shen (2003) divided mobile trust into initial trust and continuous trust, both of which are affected by the factors related to mobile vendor and technology. Li and Yeh (2010) noted that design aesthetics affect mobile trust through perceived usefulness, perceived ease of use and customization. Lee (2005) examined the effect of mobile interactivity on user trust. Mobile interactivity includes user control, responsiveness, personalization, connectedness, ubiquitous connectivity and contextual offer. Chandra et al. (2010) reported the effect of trust on user adoption of mobile payment systems.

In Table 2.4, some of the previous studies done on trust in mobile banking have been summarized. Recently, Malaquis and Hwang (2015) explored the determinants of trust of mobile banking in a developing country, Brazil. They found that trust in mobile banking has same determinants as previously pointed out in the literature. In a similar developing country setting, Kanthawongs et al., (2015) indicated that trust has a significant effect on customer satisfaction. Xiong (2013) suggested a model of mobile banking
adoption from value perspective and argued that trust and perceived value have significant impact on behavior intention of adoption of mobile banking. They also opined that bank managers should not pay attention to the value experience of banking clients but also improve trust in order to attract or retain customers. Zhou (2011) indicated that structural assurance and information quality are the main factors affecting initial trust, whereas both information quality and system quality affected perceived usefulness. In another work, Zhou (2012) posited that trust has a significant effect flow experience, and both factors determine usage intention, which in turn affects actual usage. Luo et al. (2010) argued that trust belief is a construct that positively affects customers’ behavioral intention. Their results highlighted the potential influence and appropriateness of employing personal trait factors in analyzing emerging technology acceptance. Gefen et al. (2003) concluded that structural assurance in the mobile banking system is the strongest antecedent of trust, which could increase behavioral intention. Moreover, they pointed out that trust is a construct which positively affects perceived usefulness and behavioral intention.

In short summary, the clear consensus of the previous studies is the significance role of trust in the adoption of mobile banking. Trust is recognized as the central construct of determinants of mobile banking adoption. In addition, the substantial effect of trust in determining and shaping the satisfaction of mobile banking customers was reported.
Table 2.4: Summary of Previous Studies on Trust in Mobile Banking

<table>
<thead>
<tr>
<th>Reference</th>
<th>Other Constructs</th>
<th>Results</th>
<th>Role of Trust in Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaquis and Hwang (2016)</td>
<td>Risk perception, Task characteristics, Social influence, Personal innovativeness, Undergraduate area</td>
<td>In this study, determinants of trust had similar behaviour when compared to determinants of trust previously pointed out in the literature. The authors indicated a kind of information asymmetry that could be mitigated in order to build trust in mobile banking.</td>
<td>Trust is the central construct of determinants of mobile banking adoption</td>
</tr>
<tr>
<td>Kathawongs et al. (2015)</td>
<td>Word of mouth intentions, Customer satisfaction, Information quality</td>
<td>The results of the research suggest that if mobile banking service providers promote information quality, word-of-mouth intentions and trust, the customers would be satisfied with the services.</td>
<td>Trust has a significant effect on customer satisfaction</td>
</tr>
<tr>
<td>Xiong (2013)</td>
<td>Perceived benefits, Perceived sacrifices, Perceived value</td>
<td>The results showed that perceived value and trust have significant effect on behavior intention of mobile banking adoption.</td>
<td>Trust is a construct that positively affects intention</td>
</tr>
<tr>
<td>Zhou (2012)</td>
<td>Structural assurance, Ubiquity and flow, Perceived ease of use, Personal innovativeness, Usage Intention</td>
<td>The results indicate that structural assurance is the main factor affecting trust, whereas ubiquity and perceived ease of use are the main factors affecting flow experience. Trust has a significant effect on flow experience and both factors determine usage intention.</td>
<td>Trust has a significant effect on flow experience</td>
</tr>
</tbody>
</table>
Table 2.4: Summary of Previous Studies on Trust in Mobile Banking (Continued)

<table>
<thead>
<tr>
<th>Reference</th>
<th>Other Constructs</th>
<th>Results</th>
<th>Role of Trust in Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zhou (2011)</td>
<td>Structural assurance</td>
<td>The results indicate that structural assurance and information quality are the main factors affecting initial trust, where both information quality and system quality affect perceived usefulness. Initial trust affects perceived usefulness and both factors predict usage intention.</td>
<td>Trust propensity positively affects initial trust which in turn positively influences perceived usefulness.</td>
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<td></td>
<td>Information quality</td>
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<td></td>
<td>System quality</td>
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<td></td>
<td>Perceived usefulness</td>
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<td>Usage intention</td>
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<tr>
<td>Koo and Wati (2010)</td>
<td>Information quality</td>
<td>The results indicated that trust mediated the effects of information quality and perceived usefulness and system quality and end-user satisfaction were partially mediated by trust.</td>
<td>Trust acts as a mediator between information, system quality, perceived usefulness and customer satisfaction</td>
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<td></td>
<td>System quality</td>
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<td></td>
<td>Perceived usefulness</td>
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<tr>
<td></td>
<td>Customer satisfaction</td>
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<tr>
<td>Chung and Kwon</td>
<td>Information quality</td>
<td>The results reveal that information quality and system quality influence customer satisfaction, whereas information presentation does not have an effect on customer satisfaction.</td>
<td>Trust is moderating the effect of information quality and system quality and information presentation with customer satisfaction.</td>
</tr>
<tr>
<td>(2009)</td>
<td>System quality</td>
<td></td>
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<td></td>
<td>Information presentation</td>
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<tr>
<td></td>
<td>Customer satisfaction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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Kassim, N., and Abdullah, N. A. (2010). The effect of perceived service quality dimensions


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